Amendments to the Claims

Please amend the claims as set forth in the following listing. This listing of claims will replace all prior versions, and listings, of claims for the present application:

1. (Currently Amended) A method of communicating audio information among a plurality of audio devices, comprising:

providing at least one interconnect hub;

providing a plurality of audio connection devices each of which is configured to connect to a plurality of separate audio signal sources and which is configured to provide communications among these separate audio sources;

connecting the at least one interconnect hub to ~~a~~ the plurality of audio connection devices to form a ring network of audio connection devices with the interconnect hub at the center of the ring network in a star configuration, wherein the audio connection devices connect to each other through the at least one interconnect hub;

digitizing audio information from audio sources to generate digital audio data signals;

transmitting the digital audio data signal from the audio connection devices to the interconnect hub; and

synchronously transmitting the digital audio data signals ~~between at least two~~ to each of the audio connection devices connected in a ring through the at least one interconnect hub using synchronous time division multiplex access (TDMA) communications.

2. (Previously Presented) The method of Claim 1, wherein synchronously transmitting data comprises transmitting a frame of data around the ring network at a rate of 8KHz.

3. (Previously Presented) The method of Claim 1, wherein the interconnect hub comprises at least one second ring connecting the audio communications devices.

4. (Currently Amended) A communications system comprising:

a star network having a hub located at the center of the star network, the star network carrying a synchronous data stream; and

a plurality of connection devices coupled to the hub, each connection device receiving analog signals from at least one signal source and converting the received analog signals into digital data signals;

wherein the plurality of connection devices are configured to communicate the digital data signals to the hub;

wherein the hub comprises a ring network connecting a plurality of network connections coupled to the plurality of connection devices; and

wherein the hub is configured to communicate the digital data signals to each of the audio connection devices in the ring using synchronous time division multiplex access (TDMA) communications.

5. (CANCELLED)

6. (Original) The system of Claim 4, wherein the star network carries synchronous data at a rate of 8 KHz.

7. (Currently Amended) A digital, fiber optic switching and distribution system, comprising:

a fiber optic concentrated ring configured as a star communication network to a plurality of digital signal sources;

a plurality of connection devices coupled to the fiber optic concentrated ring, each connection device receiving analog signals from at least one signal source and converting the received analog signals into digital data signals; and

a central hub coupled to the fiber optic concentrated ring and receiving the digital data signals for routing to the connection devices;

wherein the plurality of connection devices are configured to provide communications among a plurality of signal sources;

wherein the central hub comprises a ring network connecting a plurality of fiber optic

network connections coupled to the plurality of connection devices; and

wherein the central hub is configured to communicate the digital data signals to each of the audio connection devices in the ring using synchronous time division multiplex access (TDMA) communications.

8. (Original) The digital, fiber optic switching and distribution system as in Claim 7 wherein the central hub comprises dual counter rotating fiber optic rings for single point failure protection.

9. (Original) The digital, fiber optic switching and distribution system as in Claim 7 wherein the fiber optic concentrated ring comprises a plurality of subloops equal in number to at least the plurality of connection devices, wherein each subloop couples to at least one of the connection devices.

10. (Original) The digital, fiber optic switching and distribution system as in Claim 9 wherein the central hub comprises a plurality of ports individually coupled to a subloop of the fiber optic concentrated ring.

11. (Original) The digital, fiber optic switching and distribution system as in Claim 7 further comprising a plurality of control panels individually coupled to one of the plurality of connection devices.

12. (Original) A digital, fiber optic switching and distribution system as in Claim 11 wherein each of the plurality of control panels has access to each of the plurality of connection devices.

13. (Currently Amended) A digital, fiber optic switching and distribution system, comprising:

a fiber optic concentrated ring configured as a star communications network to a plurality of digital signal sources;

a plurality of connection devices coupled to the fiber optic concentrated ring, each

connection device receiving analog signals from at least one signal source and converting the received analog signals into digital data signals, each connection device comprises a digital signal processor for selective mixing of the signals received from the at least one signal source; and

a central hub coupled to the fiber optic concentrated ring and receiving the digital data signals for routing to the connection devices, the central hub comprising a bus synchronizer for synchronizing the routing of the digital data signals through the fiber optic concentrated ring;

wherein the plurality of connection devices are configured to provide communications among a plurality of signal sources;

wherein the central hub comprises a ring network connecting a plurality of fiber optic network connections coupled to the plurality of connection devices; and

wherein the central hub is configured to communicate the digital data signals to each of the audio connection devices in the ring using synchronous time division multiplex access (TDMA) communications.

14. (Original) The digital, fiber optic switching and distribution system as in Claim 13 wherein the central hub further comprises dual counter rotating fiber optic rings for single point failure protection.

15. (Original) The digital, fiber optic switching and distribution system as in Claim 13 wherein the fiber optic concentrated. ring comprises a plurality of subloops equal in number to at least the plurality of connection devices.

16. (Original) The digital, fiber optic switching and distribution system as in Claim 15 wherein the central hub further comprises a plurality of ports individually coupled to a subloop of the fiber optic concentrated ring.

17. (Original) The digital, fiber optic switching and distribution system as in Claim 13 further comprising a plurality of control panels individually coupled to one of the plurality of

connection devices.

18. (Original) The digital, fiber optic switching and distribution system as in Claim 17 wherein each of the plurality of control panels has access to each of the plurality of connection devices.

19. (Currently Amended) A digital, fiber optic switching and distribution system, comprising:

a first fiber optic concentrated ring configured as a communication network to a plurality of signal sources;

a first plurality of connection devices coupled to the first fiber optic concentrated ring, each of the first plurality of connection devices receiving analog signals from at least one signal source and converting the received analog signals into digital data signals;

a first central hub coupled to the first fiber optic concentrated ring and receiving the digital data signals for routing to the first plurality of connection devices;

a second fiber optic concentrated ring configured as a communication network to a plurality of signal sources;

a second plurality of connection devices coupled to the second fiber optic concentrated ring, each of the second plurality of connection devices receiving analog signals from at least one signal source and converting the received analog signals into digital data signals; and

a second central hub coupled to the second fiber optic concentrated ring and receiving digital data signals for routing to the second plurality of connection devices, the second central hub coupled to the first central hub as a signal fiber optic switching and distribution system;

wherein the first and second plurality of connection devices are configured to provide communications among a plurality of signal sources;

wherein the first and second central hubs comprise a ring network connecting a plurality of fiber optic network connections coupled to the plurality of connection devices;

and

wherein the first and second central hubs are configured to communicate the digital data signals to each of the audio connection devices in the ring using synchronous time division multiplex access (TDMA) communications.

20. (Original) The digital, fiber optic switching and distribution system as in Claim 19 further comprising:

a plurality of additional fiber optic concentrated rings each configured as a communication network to a plurality of signal sources;

a plurality of additional pluralities of connection devices, each of the additional plurality of connection devices coupled to one of the additional fiber optic concentrated rings, each of the additional plurality of connection devices receiving analog signals from at least one signal source and converting the received analog signals into digital data signals; and

a plurality of additional central hubs individually coupled to one of the additional plurality of fiber optic concentrated rings and receiving digital data signals for routing to the connection devices, each additional central hub coupled to at least one central hub as a signal fiber optic switching and distribution system.

21. (Original) The digital, fiber optic switching and distribution system as in Claim 20 wherein the first and second central hubs each comprises dual counter-rotating fiber optic rings for a single point failure protection.

22. (Original) The digital, fiber optic switching and distribution system as in Claim 19 further comprising a first plurality of control panels individually coupled to one of the first plurality of connection devices; and a second plurality of control panels individually coupled to one of the second plurality of connection devices.

23. (Original) The digital, fiber optic switching and distribution system as in Claim 22 wherein each of the first and second plurality of control panels has access to each of the first and

second plurality of connection devices.

24. (Original) The digital, fiber optic switching and distribution system as in Claim 19 wherein the first and second fiber optic concentrated rings each comprises a plurality of subloops equal in number to at least the plurality of first or second connection devices, respectively.

25. (Original) The digital, fiber optic switching and distribution system as in Claim 24 wherein the first and second central hubs each comprises a plurality of ports individually coupled to a subloop of the first or second fiber optic concentrated ring, respectively.

26. (Original) The digital, fiber optic switching and distribution system as in Claim 19 wherein each of the first and second plurality of connection devices comprises a digital signal processor for selective mixing of signals received from the at least one signal source.

27. (Original) The digital, fiber optic switching and distribution system as in Claim 19 wherein the first and second central hubs each further comprises a bus synchronizer for synchronizing the routing of data frame through the respective first or second fiber optic concentrated ring.